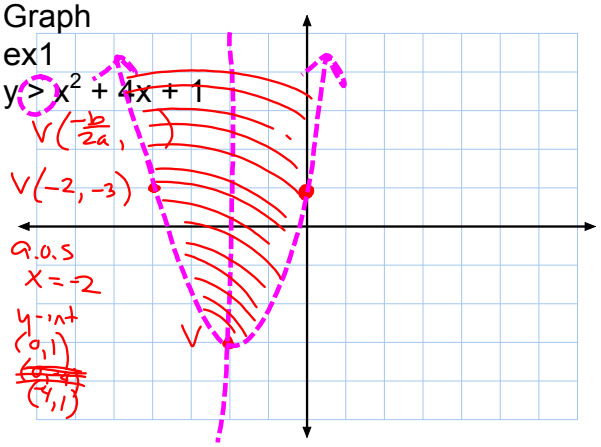
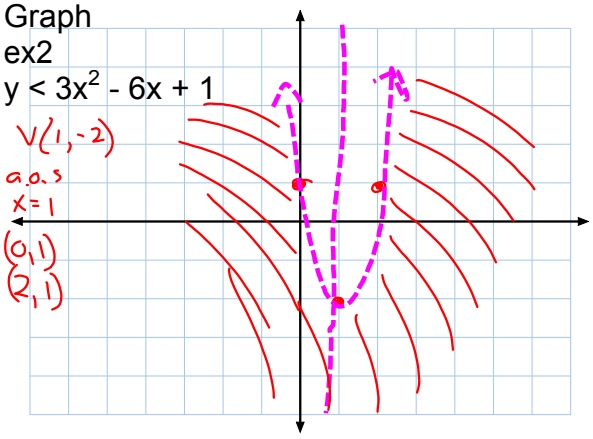
6-7 Quadratic Inequalities

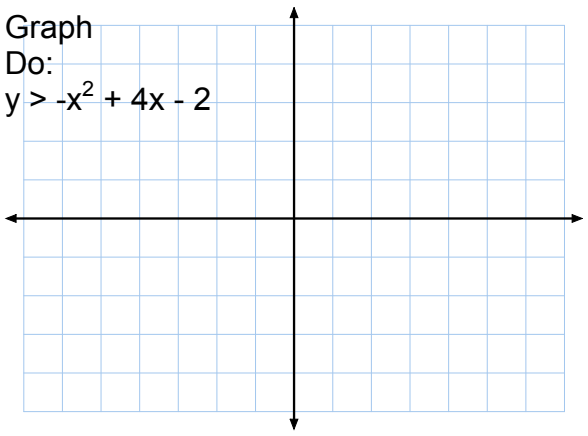
Graph
ex1
$y > x^2 + 4x + 1$



Graph
ex2
$y < 3x^2 - 6x + 1$



Graph
Do:
$y > -x^2 + 4x - 2$



Solving Quadratic Inequalities

Ex 1

$x^2 - 4x + 3 > 0$

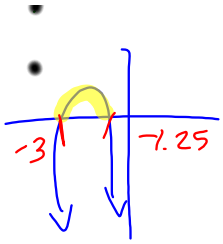
$(x-3)(x-1) > 0$

$x = 3 \quad x = 1$

$x < 1$ OR $x > 3$

Ex 2

$0 \leq -4x^2 - 17x - 15$



$-3 \leq x \leq -1.25$

Ex 3

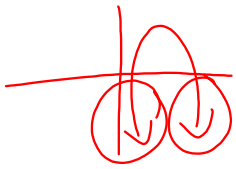
$x^2 + 3x + 9 > 0$

Ex 4

$x^2 + 3x + 9 < 0$

ex 5:
$-2x^2 + 12x - 9 < 0$

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



In General:

p333-334
17, 19, 20, 31-41odd, 42
(when solving, use a calc. to graph)

Extra examples:

tougher

$(x+3)(x-2)(x) > 0$

Ex 2

$0 \leq -2x^2 - 6x + 1$